AUSTRALIAN WAGYU ASSOCIATION™

PROGENY TEST PROGRAM

A GUIDE TO THE AWA PROGENY TEST PROGRAM

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BACKGROUND

Progeny test programs have been the backbone of the beef industry's genetic improvement for the past 30 years.

To date, the AWA has not run a formal progeny test program. Rather, the unique vertical integration and relationships within the Australian Wagyu sector has enabled AWA to build its genetic database and reference population from the high-quality commercial genotype and performance data submitted by AWA members into the Wagyu BREEDPLAN genetic evaluation.

If there is no underlying reference population (animals that have both phenotype and genotype recorded) supporting genomic selection, the accuracy of EBVs would not increase solely through the use of genomics. This is because we are unable to quantify how the DNA relates to the traits of interest. Data submission of key growth and carcase traits has increased significantly over the 2015 – 2020 period and this combined with the introduction of genomics in 2017 has had a positive influence on increasing the accuracy and reliability of key Wagyu Estimated Breeding Values (EBVs). The **AWA Progeny Test Program aims** to consolidate this progress and provide a formal program which aligns with GOAL TWO of the **2020 – 2025 AWA Strategic Plan: Advance and Protect Our Critical Genetic Resources**.

This will be achieved through large-scale testing of diverse sire genetics from sires from the global Wagyu sector and joining them with females from the Australian Wagyu cow herd.

If you wish to nominate animals or find out more about the project, please visit our website

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PROJECT **DELIVERABLES**

The AWA aims to deliver the following outcomes by the end of the Progeny Test Program, projected to be 2031:

01 Expand the diversity and size of the reference population for the Wagyu breed, leveraging the AWA genomic, pedigree and performance data to enable the validation and refinement of Wagyu BREEDPLAN and Wagyu Selection $Indexes.

02 Generate comprehensive progeny test data on approximately 250 emerging Wagyu bulls.

03 Capture data on approximately 3,500 female progeny for new and hard to measure traits including female fertility and maternal performance.

04 Capture data on approximately 3,500 steer progeny for feed efficiency, as well as new carcase and eating quality traits.

05 Produce high-accuracy EBVs for Project Sires and Contributor Cow Herds and benefit the rest of the Wagyu population through genetic linkage and the use of genomic analysis.

06 Capture slaughter data, retail meat yield and novel quality trait data on slaughter progeny for the development of new research EBVs.

07 Capture first calf performance data and re-joining performance data on approximately 3,300 female progeny.

08 Produce improved reproductive performance EBVs for Project sires and Contributor Herd animals.

09 Improve outcomes of breeding decisions and increase the rate of genetic gain within the Wagyu breed.

PROJECT **DESIGN**

The project will run for ten years from 2021 – 2031 aiming to join approximately 30-40 Fullblood and Purebred Wagyu sires per year to approximately 2,000 Wagyu females for seven breeding years using fixed time artificial insemination (FTAI) as recommended by AWA-PTP assisted reproduction partner Vetoquinol's Repro360 team.

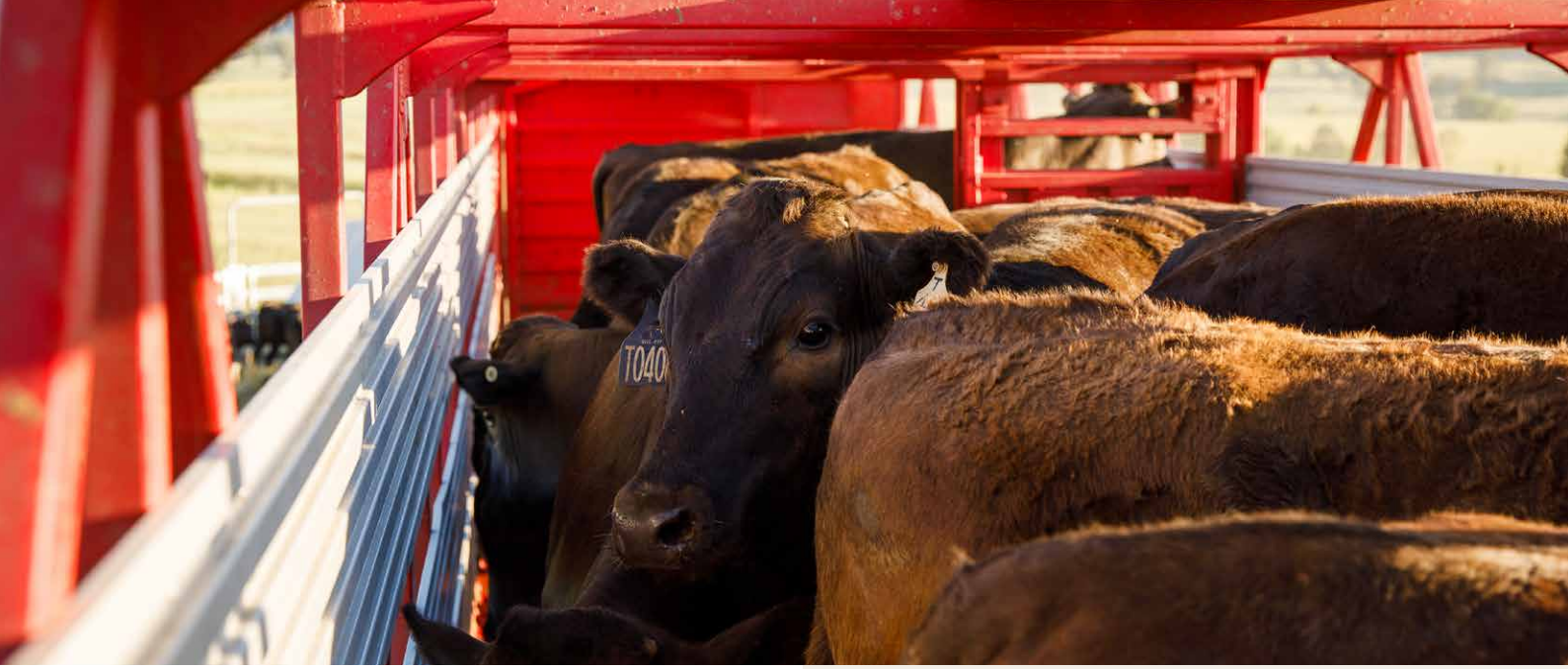
The Wagyu females will be located across multiple contributor herds, spanning a range of Australian production environments. Contributor Herds will also be supported by AWA-PTP Animal Health Partner Zoetis, to ensure best practice management of herd health treatments. All AWA-PTP progeny will be genomically SNP tested and comprehensively performance recorded to support whole-of-life progeny performance evaluation to fuel Wagyu BREEDPLAN and develop new Wagyu-specific EBVs.

Funding will be accrued over the lifetime of the Project and will comprise roughly equal contributions from Sire Entry Fees, Semen Tender proceeds and AWA retained assets. These funds will be re-invested into the project to pay for the breeding, testing and trait recording for the maximum number of traits for all progeny.

TIMELINE

The AWA-PTP Timeline can be found below, including the intended number of females and sires joined per year, calving years and subsequent years for progeny joinings (heifer progeny) and slaughter (steer progeny).

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Cows Sires	2,000 40	2,000 40	2,000 40	2,000 40	2,000 40	2,000 40	2,000 40			
Progeny Steers:Heifers		Cohort 1 50:50	Cohort 2 50:50	Cohort 3 50:50	Cohort 4 50:50	Cohort 5 50:50	Cohort 6 50:50	Cohort 7 50:50		
Natural Joining			C1	C1 C2	C2 C3	C3 C4	C4 C5	C5 C6	C6 C7	C7
Slaughter				C1	C2	C3	C4	C5	C6	C7



KEY INFORMATION FOR **SIRE OWNERS**

The AWA strongly encourages participation of both Australian-born and Overseas-born Sires, registered with AWA.

Being involved in the Project as a Sire Owner will enable you to benchmark your Sire/s within industry for live animal growth, net feed intake, carcase, eating quality and female reproduction data. This will maximise the efficacy of data to contribute to EBVs for your Sire/s and significantly improve EBV accuracy for your Sire/s and their progeny for future genetic gain.

The Project will develop new Wagyu-specific meat quality traits which include retail meat yield and fatty acid profile data which will be collected on some progeny for each Project Sire. The Project will also include natural mating of your Sire's female progeny to Contributor Herd Sires to capture important female reproduction and fertility data. The natural mating of female Project Progeny will allow Project Sires to have early access to new high-value maternal trait performance EBVs. Your Sire/s will be among the first Wagyu animals to have carcase data recorded on progeny for these new high-value research traits.

By participating in the Project, you will receive analysis of Sire data showing the progeny performance, allowing you to rank the performance of your Sire/s with within the Project for all traits analysed. Involvement in the Project will allow you to participate in the largest formal Progeny Test Program for Wagyu cattle outside of Japan.

ENTRY REQUIREMENTS

Wagyu sires that enter the AWA-PTP must be Herdbook-registered, Fullblood or Purebred Japanese Black Wagyu sires, nominated by Australian Wagyu Association members.

The AWA Genetic Improvement Committee, in conjunction with an independent quantitative genetics' advisor, will make recommendations on animals to be accepted into the Project. The AWA-PTP Consultative Committee will be responsible for the selection of animals.

Recommendations will be based on the following criteria:

- Linkage and diversity within the Wagyu breed
- EBV diversity and accuracy
- Younger or unproven (low progeny number) animals are preferred, however high accuracy link-sires will also be considered
- Genetic conditions (testing for genetic conditions must be completed)
- Animal health status (Licensed straws provided or proven to have tested negative for or vaccinated against Pestivirus, IBR, Vibriosis & Leptospirosis).

All nominated animals must be genomic DNA tested as recognised within Wagyu BREEDPLAN monthly reports.

The AWA-PTP Consultative Committee and independent genetic advisor, Dr Samuel Clark (UNE) is responsible for reviewing and approving all sire nominations. The AWA-PTP Consultative Committee reviews the recommendations of the Genetic Improvement Committee whilst making final approval decisions.

The AWA-PTP Consultative Committee consists of 9 persons, 3 from the AWA and 6 from the Wagyu Sector.

FEES, TERMS AND CONDITIONS

Animals may be nominated by the AWA member (owner) who has legal ownership of the animal/s and/or represents the interests of all owners and wishes to nominate for participation in the Project in agreement with the terms and conditions of the Project.

Members can nominate sires under two categories.

PROJECT STANDARD SIRE
AUD $7,500 + GST - US $6,500

260 SEMEN STRAWS TO BE SUPPLIED TO THE PROJECT

60 straws to be retained and used by the project

140 straws will be offered for public tender as part of semen packages of 5 – 20 straws from each sire as chosen by the purchaser. *It is expected that Standard Sire progeny numbers and data recorded from purchasers will be amplified through industry use.*

60 straws will be retained for use in an F1 component of the AWA-PTP

A **maximum of 30 sires** will be accepted as Project standard sires each year.

PROJECT LINK SIRE
AUD $20,000 + GST - US $15,000

260 SEMEN STRAWS TO BE SUPPLIED TO THE PROJECT

100 straws to be used across two years, creating double the progeny numbers and enabling genetic linkage between years of the project within the analysis

60 straws will be retained for use in an F1 component of the AWA-PTP

Semen from these sires will not be offered for tender, with residual straws (100) held by AWA for use in future genetic projects as Link Sires. *If during the 10-years of the PTP, another trait of interest is identified that was not captured in earlier years of the project, Link Sires can be re-entered, and the new data collected. Through genetic correlations of traits and the performance of the Link Sires, Standard Sires will also benefit.*

WHY DO SIRE OWNERS PAY ENTRY FEES IF AWA IS SELLING STRAWS?

The Sire Owners who nominate sires are the primary beneficiaries of the program as the AWA-PTP's main purpose is to progeny test and prove the maximum number of new sires.

Two thirds (2/3) of the funds required to run the Project are generated from the Sire Entry Fees and the Semen Tender proceeds. These funds will be invested into the Project to ensure the optimal number of progeny are produced and effective measurements on the maximum number of traits are captured. The Project's aim is to prove the Sires and contribute positively to the future genetic progress of the Breed.

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KEY INFORMATION FOR CONTRIBUTOR **HERD OWNERS**

For AWA Australian members with registered Fullblood and Purebred cow herds, the Project enables close genetic linkage to the AWA-Wagyu reference population to ensure that research outcomes, particularly in the genomics area, will have high relevance to your herd.

Being involved in the Project as a Contributor Cow Herd will enable you to benchmark your herd within industry for live animal growth, net feed intake, carcase, and female reproduction data. This will maximise the efficacy of data to contribute to EBVs for your cow herd and significantly improve EBV accuracy for your cows and their progeny for future genetic gain.

The Project will develop Wagyu-specific meat quality traits which include retail meat yield and fatty acid profile data which will be collected on as many progeny as possible. Your dams will be among the first Wagyu animals to have carcase data recorded on progeny for these new high-value traits.

The Project will include natural mating of female Project Progeny to your sires, so that the genetic merit of the high-value Project sires can be retained within your female herd through breeding as you decide. The natural mating of female Project Progeny will allow your herd to have early access to new high-value maternal trait performance EBVs.

By participating in the Project, you will receive analysis of herd data showing the progeny performance, allowing you to rank the performance of your females with within the Project for all traits analysed. Involvement in the Project will allow you to participate in the largest formal Progeny Test Program for Wagyu cattle outside of Japan.

ENTRY REQUIREMENTS

Any Australian-based Herdbook registered cow herds with a minimum of 100 females have the opportunity to be at the forefront of genetic improvement for the Wagyu sector and have access to leading new industry sires and a cow herd with high accuracy breeding values for current and new traits.

When selecting females, the following will be considered: their genetic linkage within the Wagyu breed as well as the other nominated animals, EBV diversity & accuracy, age – second calf (approx. 3yo) or older preferred, and the nominating herd's BREEDPLAN completeness of performance rating.

Contributor herds must also agree to the following:

- will join the these females for a minimum of 2 calving years via fixed-time AI to sires as directed by the Project; and
- will retain all female Project Progeny to be naturally mated for two calving cycles and agree to the collection of data for the Project from the females and their progeny until they have weaned their second calf.
- will retain ownership of all male Project Progeny (steers) from birth to feedlot entry.

The AWA-PTP aims to remain flexible and give Contributor Herds the option to continue their normal process of selling, feeding, or retaining ownership of Steer Progeny within their own supply chain. It is, therefore, open to discussion with each individual Contributor Herd as to what their preference may be. However, if herds wish to capture Net Feed Intake (NFI) data on their progeny, they will have to feed their Steer progeny through one of the AWA-nominated feedlots.

Regardless of what Contributor Herds choose, it is vital that Steers remain in their management groups (contemporary groups) from birth until slaughter.

WHO OWNS THE PROJECT PROGENY?

The Contributor Herd retains ownership of all Project progeny but is required to capture all trait measurements (in cooperation with the AWA for some traits).

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TRAIT RECORDING

For majority of contributor herds the data collection required for traits within the Progeny Test Program will fall into standard operating practices.

Data collection points for Project Progeny are 200, 400 and 600 day weights, Mature Cow weights during weaning, along with joining and pregnancy testing information for females that are subsequently naturally joined.

The most significant adjustment for many contributor herds is the capturing of Birth Data including tagging calves, recording of birth date, sex, birth weight, calf fate code, calving ease score and collection of a DNA samples.

The AWA will work in conjunction with Feedlot and Slaughter partners to ensure that the required data is collected and supplied to the AWA from Feedlot Induction to Slaughter.

WHAT CONTRIBUTIONS DOES THE AWA MAKE TO CONTRIBUTOR HERDS FOR BEING INVOLVED?

The AWA will make the following contributions/payments to the Contributor Herds through the Project:

- The cost of all consumables required for the synchronisation program and semen straws for artificial insemination of the cows will be supplied by the AWA in conjunction with *Vetoquinol*'s Repro360 team.
- DNA testing *(Standard Bundles)* and AWA registration fees will be paid by the AWA.
- A fee of $20 per cow inseminated will be paid to compensate extra labour required to implement the FTAI program.
- A fee of $5.00 per cow pregnancy tested in calf will be paid to compensate technician fees.
- A fee of $20 per calf for each calf sired by the Project's AI bulls will be paid for tagging calves, recording of birth date, calf sex, birth weight, calf fate code, calving ease score and collection of a TSU sample.
- A fee of $10 per Project calf will be paid for yard weaning of calves, collection of weaning weights and collection DNA recollect samples.
- A fee of $5.00 per Project calf will be paid for the recording of yearling weights of steers and heifers.
- A fee of $5.00 will be paid for each Project heifer calf retained and subsequently joined for its first calving cycle by natural service and pregnancy tested in calf; with a further fee of $20 per calf paid for the subsequent recording of the Project Heifer's natural-born calf birth date, calf sex, birth weight, calf fate code and calving ease score.
- A fee of $5.00 will be paid for each Project heifer subsequently joined for a second calving cycle by natural service and pregnancy tested in calf. A further fee of $20 per calf will be paid for the subsequent recording of calf birth date, calf sex, birth weight, calf fate code, calving ease score and calf weaning weight.
- one TSU sampling kit including TSU vial, NLIS tag and 2 management tags per Project calf will be supplied by the AWA in conjunction with *Allflex Australia*.
- Assist the Contributor Herd in establishing an animal health program, in consultation with the Project Animal Health Partner *Zoetis*.
- A proportion of Animal Health Products for project progeny will be supplied in conjunction with Animal Health Partner *Zoetis*.

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